

US CLAIMS

WHAT IS CLAIMED IS:

1. An analyzer device for analyzing at least one gas contained in a liquid, in particular a drilling liquid,
5 flowing in a drilling pipe in an installation for extracting fluid from a subsoil, the device being of the type comprising:
- analyzer means for analyzing the or each gas; and
 - sampling means for sampling at least a fraction of
- 10 the or each gas and comprising at least one porous membrane member, said member comprising a support and possessing a first face in contact with the liquid flowing in the drilling pipe and a second face opening into a pipe connected to the analyzer means;
- 15 wherein said first face presents Vickers hardness greater than 1400 kgf/mm², in particular Vickers hardness lying in the range 1400 kgf/mm² to 1900 kgf/mm².
2. A device according to claim 1, wherein the porous
20 membrane member includes a coating covering the support over said first face.
3. A device according to claim 2, wherein the coating is based on silicon carbide.
- 25 4. A device according to claim 1, wherein said first face is also water- and oil-repellent.
5. A device according to claim 4, wherein the wetting
30 angle of water on said first face is greater than 120°.
6. A device according to claim 4, wherein said first face includes fluorine-containing polymers incorporated by grafting.

7. A device according to claim 1, wherein the first face of the membrane member that is in contact with the liquid is substantially plane.

5 8. A device according to claim 1, further comprising regulator means for regulating the pressure in the pipe in register with the second face of the membrane member.

9. A device according to claim 1, including a plurality
10 of membrane members, with the second faces of said members opening out in succession to the pipe connected to the analyzer means.

10. An installation for extracting fluids from the
15 subsoil, the installation being of the type comprising a drilling pipe connecting at least one point of the subsoil to the surface, and a delivery pipe connected to the drilling pipe at the surface, the installation further comprising at least one device according to claim
20 1, and the sampling means of said device being mounted on a tubular element constituted by the drilling pipe or by the delivery pipe.

11. An installation according to claim 10, wherein the
25 first face of the membrane member in contact with the liquid is disposed substantially parallel to the long axis of the tubular element.

12. An installation according to claim 11, wherein said
30 first face in contact with the liquid is disposed in a wall of the tubular element.

13. An installation according to claim 11, wherein said
35 first face is disposed set back in a wall of the tubular element.

14. An installation according to claim 13, wherein the tubular element includes a branch connection, and wherein said sampling means are placed in said branch connection.

5 15. An installation according to claim 10, wherein the sampling means of said device are placed in said drilling pipe upstream from said delivery pipe.

10 16. An installation according to claim 10, further comprising filter means downstream from the delivery pipe, and including two devices according to claim 1, the respective sampling means of the two devices being placed respectively upstream and downstream from the filter means.

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